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Does Monetary Policy Play Effective Role in Controlling Inflation in Pakistan

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1. INTRODUCTION

Inflation is politically costly for the government (Haque and Qayyum, 2006). High and persistent inflation is a regressive tax which adversely impacts the poor (Baily, 1956, and Fisher and Modigliani, 1978a, 1978b). The poor are extremely limited in their options to protect themselves against inflation; they are normally asset-poor, while most of their saving is in the form of cash. Inflation erodes cash savings and protects the rich who hold real assets (Fisher and Modigliani, 1978a). Given the well-known costs of inflation, policy now in all countries is inflation-averse. Studies have also found that high and volatile inflation has been detrimental to growth and financial sector development. Resource allocation is inhibited as inflation obscures relative price changes and thus inhibits optimal resource allocation.

Knowledge about the factors that drive inflation is important to formulate appropriate policy to control inflation. Unquestionably, empirical evidence points to “inflation being always and everywhere a monetary phenomenon” [Friedman (1963)]. However, there still remains some debate on whether supply-side factors could cause inflation without

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monetary accommodation (Bernanke, 2005). The structuralist school of thought holds that supply constraints drive up prices of specific goods and have wider repercussions on the overall price level. Similarly, there are a number of possible sources of rising costs such as wages, profits, imported inflation, exchange rate, commodity prices, external shocks, exhaustion of natural resources, and taxes. For example, in Pakistan, increases in the wheat support price have frequently been blamed for increasing inflation (Government of Pakistan, Various Issues).

Since 1970s controlling inflation has been a top priority for policy makers all over the world. Despite a long and unsettled theoretical debate regarding the causes of inflation it is consensus among economists and policy makers that maintaining price stability is the prime objective of monetary policy (King, 1999 and Blejer, et al., 2000). The monetary policy is conducted by the central bank. Therefore, maintaining price stability is the responsibility of a central bank and it is accountable for not achieving stable prices (Goodfriend, 2000, King, 1999, and Blejer and Leon, 2000). Like other central banks of the world State Bank of Pakistan (SBP) is also explicitly mandated to ensure price stability. It is established that the State Bank of Pakistan is fully capable of implementing its own independent monetary policy consistent with the needs of the domestic

economy and be forward-looking to achieve its inflation target (Khan and Schimmelpfennig, 2006).

The recent rise of inflation in Pakistan has once again triggered a debate on the causes of inflation similar to the debate that took place during nineties (see for example Khan and Qasim, 1996). Even policymakers are divided on the issues of causes of inflation. Policymakers on one side have contended that the current inflation was caused by cost push factors such as wheat procurement price and oil price increases (GOP 2005, 2006) and on the other side it is argued that accommodative monetary policy is responsible for current surge in inflation (Akhtar, 2006). Further it is pointed out that monetary overhang is a cause of inflation (SBP, 2007 and Sherani, 2005). It is not surprising that policymakers are pointing to the factors beyond their control as the cause of inflation and commentators are pointing to a policy failure and the inability of SBP to control money supply growth. The main objective of this study is to assess the efforts of SBP to control inflation in Pakistan.

Next section discussed salient features of monetary policy in Pakistan including objectives, monetary targets and instruments. Section 3 contains results and discussion and final section concludes the study.

2. SALIENT FEATURES OF THE MONETARY POLICY

State Bank of Pakistan was established with two broad objectives; to secure monetary stability and to find fuller utilisation of country's productive resources. These objectives are confined under the head of 'Functions and Responsibilities of the Central Board' by making it responsible to secure monetary stability and soundness of the financial system. The Act 1956 of the State Bank of Pakistan (amended) states that 'the target rates of growth and inflation set by the Federal Government are the targets of monetary policy'. Therefore target rate of inflation is the prime objective of monetary policy in Pakistan.

Monetary policy management is one of the primary goals of the State Bank of Pakistan (SBP). In Pakistan the monetary policy has been supportive of the dual objectives; promoting economic growth and price stability. However, during the period from 2001 to 2005 monetary policy in Pakistan was biased towards supporting growth because of expectations that inflation could be maintained at low levels while giving the economy a monetary stimulus. Inflation started accelerating in 2005 that forced a reversal of monetary policy (SBP-MPS, 2006).

The SBP is claiming to maintain tight monetary policy to deal with inflation particularly core inflation since September 2004 (SBP Annual Report, 2006-07). Further it is claimed that monetary policy has had a

visible impact on core inflation during FY06 and FY07. However, at the end of financial year 2007 core inflation started increasing. The stated reason is reserve money growth and supply management problem.

It is observed that the tight monetary policy stance, has begun to lose some of its steam as manifested by a moderate increase in KIBOR and banks' lending rates, almost flat Monetary Conditions Index (MCI), a fall in the effective CRR, and persistently high annualized M2 growth rate.

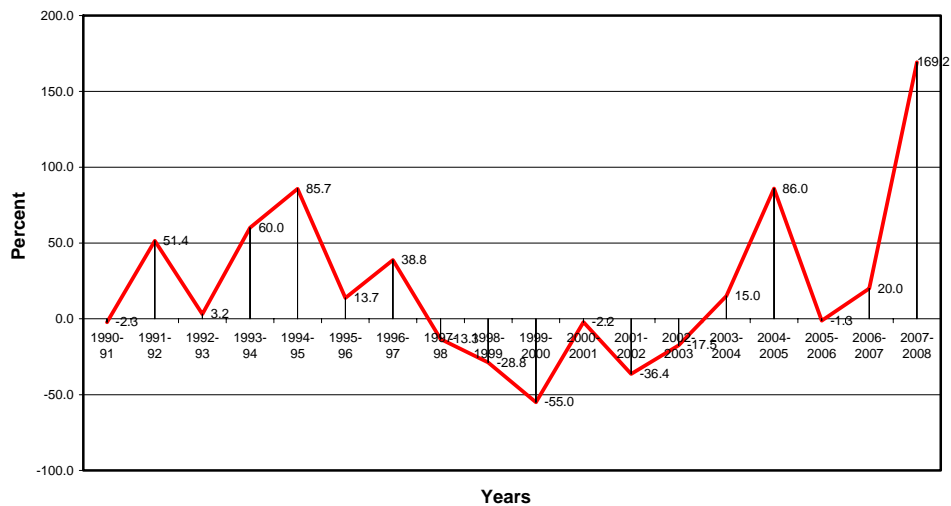
First we discuss the situation of state of inflation, which is prime objective of monetary policy in Pakistan, during the period from 1991 to 2008. The target and actual rate of inflation is given in Table 1 and percentage deviation of actual rate of inflation from the targeted rate of inflation is presented in the Figure 1. As can be seen from the table, from 1991 to 1997 the actual rate of inflation remained above the target level. After 1997 till 2003 the actual rate of inflation in Pakistan remained below the target level implies it was under the control of authorities. It started rising from 2004 and remained above the target level except one year that is 2006 when it was exactly equal to the target rate. At the end of the financial year 2007-08 actual inflation substantially (100% higher) surpassed the target level of inflation set by the federal government..

In order to achieve the objectives of monetary policy the SBP targets monetary aggregate (M2) in accordance with the targets of real GDP growth and inflation set by the Government.

Table 1: Targeted and Actual Rate of Inflation

Years	Actual	Target
1990-91	12.7	13.0
1991-92	10.6	7.0
1992-93	9.8	9.5
1993-94	11.2	7.0
1994-95	13.0	7.0
1995-96	10.8	9.5
1996-97	11.8	8.5
1997-98	7.8	9.0
1998-1999	5.7	8.0
1999-2000	3.6	8.0
2000-2001	4.4	4.5
2001-2002	3.5	5.5
2002-2003	3.3	4.0
2003-2004	4.6	
2004-2005	9.3	5.0
2005-2006	7.9	8.0
2006-2007	7.8	6.5
2007-2008	17.5	6.5

Figure: 1 Percentage Deviation of Actual from Targeted Inflation



2.2. M2 Growth as a Monetary Target -

In order to control inflation one of the important and crucial intermediate target variables of monetary policy in Pakistan is money supply. Private sector credit growth and broad money (M2) growth are leading indicators of inflation in Pakistan (Khan and Schimmelpfennig, 2006). It has already established that excess money supply growth causes inflation in Pakistan (Qayyum, 2006). Therefore, the SBP has been using M2 aggregate (i.e., currency + demand deposits + time deposits) as an intermediate target to control inflation (Akhtar, 2006). The selection of M2 as a policy variable is based on the assumption that the demand for M2 function is stable in Pakistan and it has strong association with the rate

of inflation. The stability of M2 demand function has been established in a number of studies such as Qayyum (2006), among others. The money growth and rate of inflation have positive relationship having coefficient of correlation as 0.27. Further money growth and next year's rate of inflation also have positive relationship as is indicated by the cross correlations coefficient (i.e., 0.44). Moreover excess money growth positively affects the future rate of inflation with coefficient of cross correlation as 0.42.

By using the estimated money demand function the SBP set the target rate of growth of M2. Fisher's equation of exchange has been used by the SBP to calculate the growth target for M2. It assumes that there is one to one relationship between prices and money supply in Pakistan. The change in M2 can be decomposed as change in Y and change in P assuming constant velocity.

According to the law and practice target rate of growth and target rate of inflation are fixed by the Federal Government. The SBP just combine those targets and obtain target rate of growth of money supply. During calculation of target value it is implicitly assumed that the velocity of circulation money in Pakistan is constant. However recent studies found that the velocity of circulation of money in Pakistan is not constant it is showing decreasing trend since 1973 (Qayyum, 2006). This decline in

velocity is due to the structural changes in the financial sector of Pakistan that induced the process of monetization and expansion of commercial banking during last two decades. This declining nature of velocity of money implies that formulation of monetary policy must consider development in the real and financial sectors and treat them as constraints on the policy. Further it casts doubt on the working of appropriateness of value of target rate of money growth to combat inflation. For example if the target rate of growth and inflation are fixed by the Federal Government as 8% and 5% respectively, then target rate of growth in M2 worked out to be 13%. If there is decline in velocity by 2% then target rate of M2 growth would have been 15% rather than 13%.

Actual M2 growth and targeted M2 growth during for the period from 1991 to 2007 are presented in Table 2. As can be seen from the Table, after 2001 actual M2 growth remained higher than the target rate of money growth set by the SBP to control inflation. It implies that either the SBP failed control growth of money supply or following loose monetary policy during this period. However the SBP claims that it is pursuing tight monetary policy since 2004 and empirical evidences contradicts the claim. The money supply growth at first round affects real GDP growth and at second round it affects inflation. In Pakistan growth in M2 affects rate of inflation after one year (Qayyum, 2006). Positive deviation of money

growth from target level is indicative that inflation is going to rise in future. Business sector in Pakistan was expecting a rise in inflation (PIDE, 2007) along with the speeches of the then governor of SBP.

Table No. 2
Targeted and Actual M2 Growth in Pakistan

	Target		Actual	
Years	Target	Growth	Actual	Growth
1990-91	34.2	10.80	59.39	17.4
1991-92	48.2	12.90	104.93	26.2
1992-93				
1993-94	79.4	14.03	108.01	18.1
1994-95	76.3	11.51	121.24	17.2
1995-96	100.5	13.00	113.94	13.8
1996-97	116.0	12.36	114.60	12.2
1997-98	150.0	14.24	153.09	14.5
1998-99	164.0	13.64	74.22	6.2
1999-00	121.0	09.44	120.99	9.4
2000-01	147.0	10.50	126.03	9.0
2001-02	146.0	09.50	235.33	15.4
2002-03	190.0	10.80	219.87	12.5
2003-04	230.0	11.10	317.40	12.3
2004-05	280.0	11.30	745.2	19.3
2005-06	380.0	12.8	446.3	15.2
2006-07	459.9	13.5	659.9	19.3
2007-08		13.7		15.2

2.3 Instruments of Monetary Policy

Last two decades witnessed a number of changes in the monetary sector of Pakistan. In the beginning of 1980s monetary authorities in Pakistan has decided to abandon the fixed exchange rate mechanism and adopted floating exchange rate system. This step supposed to have

activated another important channel of monetary transmission mechanism in Pakistan. Further in late 1980s the authorities has started working on comprehensive financial sector reforms with the help of international financial agencies such as International Monetary Fund and World Bank (Ahmed, 2006 and Khan and Khan, 2007). During these reforms a number of steps have been taken to modernise monetary sector. On this road monetary authorities have taken steps to utilise the market based instruments of monetary policy in Pakistan.

After the start of financial sector reforms Open Market Operation (OMO) has become an important instrument of monetary policy in Pakistan. The SBP can influence/manage domestic liquidity through purchase or sale of government securities in the secondary market. The OMO can also be used to maintain the level of reserve money according to the operating target. Other instruments are discussed in the next sections.

2.3.1 Cash Reserve Requirement

Cash Reserve Requirement is another instrument of monetary policy being used by the SBP in Pakistan. The SBP imposes cash reserve requirement on all deposits of scheduled banks as an instrument of monetary policy. Currently weekly reserve requirement of every Bank is fixed as 9 percent of average weekly deposits. However, under another condition the amount of these reserves should not be less than 4 percent of

daily deposits. Apart from the reserve requirement every Bank has to maintain 15 percent of total daily deposits as a liquidity requirement. For this purpose liquidity includes cash, gold and government securities. Movement of CRR during last two decades is presented in the Table 3. Now it reached at highest level in the last two decades.

Table No. 3
CASH RESERVE REQUIREMENT

No	Effective From	Percentage of Demand and Time Liabilities	
		Minimum	Weekly Average
1	01-01-1991	-	5.0
2	28-07-1997	4.0	5.0
3	22-06-1998	-	3.75
4	05-09-1998	4.0	5.0
5	19-05-1999	2.5	3.5
6	12-07-1999	4.0	5.0
7	07-10-2000	6.0	7.0
8	16-12-2000	4.0	5.0
9	30-12-2001	3.0	5.0
10	06-01-2001	4.0	5.0
	23-05.2008	9.00	

2.3.2 Discount Rate

Current Monetary Policy seeks to check rising inflation through change in discount rate and CRR. The assumption is that the two changes would cut down money supply and therefore inflation. The transmission mechanism i.e. link among interest rate, money supply and inflation is not completely understood or at least has not been made explicit by SBP. It appears that complete understanding of issues like state of effectiveness of

different channels, Lag structure of monetary policy changes, magnitude of pass-through of policy changes to inflation and output and nature of relationship amongst, instruments and goals of monetary policy (inflation and output) is lacking.

Movement in interest rate has been presented in the Table 4. As can be seen from the Table, the interest rate was at the peak level of 14% on April 03, 1999 and June 07, 2001. Then it started to decline and reached at the lowest level of 7.5% on November 18, 2002. It remained at lowest level until April 11, 2005. This implies that during this period SBP was following very loose monetary policy. Now it has reached at 12 % level on May 21, 2008.

Table 4: Discount Rate

	Date	Change (Basis Points)	Rate
1.	April 03, 99		14.0
2.	May 19, 99	-100	13.0
3.	January 05, 00	-100	11.0
4.	September 19, 00	100	12.0
5.	October 05, 00	100	13.0
6.	June 07, 01	100	14.0
7.	July 19, 01	-100	13.0
8.	August 17, 01	-100	12.0
9.	October 20, 01	-200	10.0
10	January 23, 02	-100	9.0
11	November 18, 02	-150	7.5
12	April 11, 2005	150	9.00
13	July 22, 2006	50	9.50
14	August 01, 2007	50	10.00
15	January 31, 2008	50	10.5
16	May 21, 2008	150	12.00

The monetary tightening seems to lay major emphasis upon the interest rate channel. This brings to fore the question of effectiveness of the interest rate channel of the transmission mechanism. From the Monetary Policy Statement it is not clear whether the issues of lags and the magnitude of pass-through of changes in policy rate to inflation have been investigated at the SBP level or that independent studies on the subject have been accounted for.

It is interesting to note that during recent period interest rate and money growth are negatively correlated that is -0.71. Interest rate also significantly affects current and future rate of inflation as correlation coefficient between the two are -0.36 and -0.45 respectively. In this regard, studies show that interest rate influences inflation with a lag of 12 to 18 months (Kemal, 2006) and the magnitude of impact is very small (Khan and Qayyum, 2007, Qayyum, Khan and Khawaja, 2007). However, Khan (2007) shows that the relationship between interest rate and inflation is positive. If the demand for goods and services does not increase, the firms may pass on the increase in financial cost to the consumers thereby raising inflation.

Increase in interest rate will affect demand for credit to the business sector. The transmission mechanism is that it effect money market rate, saving rate and lending rate. Studies found that it takes 12 to

18 month to effect lending rates and upto two years to affect saving rates in Pakistan. It implies that this will affect first lending rate than the deposit rates. Through this channel demand for credit by the private business sector would decrease. Evidences indicate that demand for credit by the private business sector is not much affected by the movement in the interest rate. Therefore, movement in interest rate would be ineffective to control money supply.

The SBP seems to have based its money growth and hence the stance of monetary policy, keeping in view the growth target fixed by the government. The question arises what happens to money growth if the actual output growth is less than the targeted level?

The increase in interest rate would increase interest payments on government debt thereby increasing fiscal deficit. Given that the government had been borrowing, beyond the agreed level, from the SBP and that the SBP has not been able to restrain the government from doing so, the likelihood is that government would finance the higher deficit on account of higher interest payment by borrowing further from the central bank. Thus a part of the decline in monetary growth due to higher interest payments might be offset.

5. CONCLUSIONS

This paper is written with the aim of getting a clear understanding of Monetary Policy Framework and its effectiveness to control inflation in Pakistan. In this regard, we presented the salient features of current Monetary Policy. We have come up with the following findings.

The monetary authority was successful in controlling inflation when it successfully controlled the money supply target. The calculation of money supply target needs to be improved to get appropriate target level of M2. It is also concluded that in the recent years SBP failed to control money supply and hence rate of inflation within the set target level.

There seems to be a lack of coordination between Fiscal and Monetary Authorities. The Reaction Functions of Monetary Policy seems to be inconsistent overtime. The understanding of issues regarding monetary policy transmission mechanism like state of effectiveness of different channels, lag structure of monetary policy changes, magnitude of pass-through of policy changes to inflation and output and nature of relationship amongst, instruments and goals of monetary policy (inflation and output) seems to be lacking and need fresh investigation.

REFERENCES

- Akhtar, S. (2006) Pakistan—Economic Outlook and Prospects, Speech Delivered at the Adam Smith Institute, Thun, Switzerland, June 27.
- Bailey, M. J. (1956) The Welfare Cost of Inflationary Finance. *Journal of Political Economy* 64, 93–110.
- Bernanke, B. S. (2005) Inflation in Latin America—A New Era?, Remarks at the Stanford Institute for Economic Policy Research Economic Summit, February 11, 2005. Available via the Internet at: <http://www.federalreserve.gov/boarddocs/speeches/2005/20050211/default.htm>.
- Bernanke, B. S., T. Laubach, F. S. Mishkin and A. S. Posen (1999), “Inflation Targeting: Lessons from the International Experience”, Princeton, NJ: Princeton University Press.
- Blejer, M. I., and A. M. Leone (2000) Introduction and Overview, In Blejer, *et al. Inflation Targeting in Practice: Strategic and Operational Issues and Application to Emerging Economies*. Washington, D. C.: International Monetary Fund.
- Blejer, M. I., A. Ize, A. M. Leone, and S. Werlang (2000) *Inflation Targeting in Practice: Strategic and Operational Issues and Application to Emerging Economies*. Washington, D. C.: International Monetary Fund.
- Blinder, A., C. Goodheart, P. Hildebrand, D. Lipton and C. Wyplosz (2001), How Does Central Bank Talk? Geneva Report on the World Economy 3, ICMB and CEPR.
- Cecchetti, S. G. (2000) Making Monetary Policy: Objectives and Rules, *Oxford Review of Economic Policy* 16:4, 43–59.
- Fischer, S. and F. Modigliani (1978a) Towards Understanding of the Costs of Inflation, In K. Brunner and A. H. Meltzer (ed.) *The Costs and Consequences of Inflation*. Carnegie-Rochester Conference Series on Public Policy, Vol. 15, 5–42.
- Fischer, S. and F. Modigliani (1978b) Towards Understanding of the Real Effects and the Costs of Inflation, *Weltwirtschaftliches Archiv* 114, 810–832.
- Friedman, M. (1963) *Inflation: Causes and Consequences*, New York: Asia Publishing House
- Geraats, P. M. (2005a), “Transparency of Monetary Policy: Does the Institutional Framework Matter? (Mimeographed)
- Goodfriend, M. (2000) Maintaining Low Inflation: Rationale and Reality, In Blejer, *et al. Inflation Targeting in Practice: Strategic and Operational Issues and Application to Emerging Economies*, International Monetary Fund

- Hahn, V. (2002), “The Transparency of the Central Bank Objectives (Mimeographed).
- Pakistan, Government of (Various Issues) *Pakistan Economic Survey*, Ministry of Finance, Government of Pakistan
- Khan, M. Arshad and A. Qayyum (2007) Trade, Financial and Growth Nexus in Pakistan, *Economic Analysis Working Papers*, Vol. 6, No. 14
- Khan, A. H. and M. A. Qasim (1996) Inflation in Pakistan Revisited, *The Pakistan Development Review* 35:4, 747–759.
- Khan, S. (2007), “Channels and Lags in Effects of Monetary Policy’s Transmission Mechanism: A Case of Pakistan”, Unpublished Ph.D Dissertation (Pakistan Institute of Development Economics, Islamabad).
- Khawaja, M. I. and Musleh ud Din (2007) “Banking: Interest Rate Spread, Inelastic Deposit Supply and Mergers” *The Pakistan Development Review*, Vol. 45, No. 4, pp. 1055-1070.
- King, M. (1999) Challenges for Monetary Policy: New and Old, in *New Challenges for Monetary Policy*, Proceedings of the Symposium sponsored by the Federal Reserve Bank of Kansas City
- Liviatan, N. (2003) Fiscal Dominance and Monetary Policy Dominance in the Israeli Monetary Experience, Bank of Israel Discussion Paper No.2003.17.
- Malik, W. S. and Ahmed, M. A. (2007) Taylor Rule and Macroeconomics Performance in Pakistan, *Pakistan Institute of Development Economics Working Paper* No.34
- Qayyum, A. (2006) Money, Inflation and Growth in Pakistan, the *Pakistan Development Review*, 45:2, 203-212
- Qayyum, A. and Faiz Bilques (2005) P-star Model: A Leading Indicator of Inflation for Pakistan, the *Pakistan Development Review*, 44:2, 117-129
- Qayyum, A., Khan, S. and Khawaja, M. I. (2005), “Interest Rate Pass-through in Pakistan: Evidence from transfer Function Approach”, *The Pakistan Development Review*, Vol. 44, No. 4, pp. 975-1001.
- Roll, E. et al. (1993), *Independent and Accountable: A New Mandate for the Bank of England*, London. Centre for Economic Policy Research.
- Sherani, S. (2005) *The Dark Side of the Force*, ABN-AMRO, *Economic Focus—Pakistan*. Monday, May 30.
- State Bank of Pakistan (2006) *Monetary Policy Statement*, State Bank of Pakistan